

CLAIMS

1. A method comprising:
forming at least one waveguide, and a cladding contacting the waveguide, each from a common prepolymer, the waveguide and cladding having a refractive index difference.
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2. A method as in claim 1, involving exposing a portion of the common prepolymer to a first amount of polymerizing energy to form the at least one waveguide and exposing a second amount of a common prepolymer to a second amount of polymerizing energy to form the cladding.
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3. A method as in claim 2, wherein the polymerizing energy is electromagnetic radiation.
4. A method as in claim 1, comprising:
curing an array of at least two essentially parallel lines of a fluid prepolymer to a first
15 extent to form at least two essentially parallel lines of polymeric material cured to a first extent;
contacting the at least two lines of cured polymeric material with a portion of the fluid prepolymer and curing the portion to a second extent to form a portion of the polymeric material cured to the second extent contacting the lines of polymeric material cured to the first extent.
- 20 5. A method comprising:
forming a waveguide and cladding; and
altering a refractive index ratio between a waveguide and cladding.
6. A method as in claim 5, the waveguide and cladding each being formed of a polymeric
25 material.
7. A method as in claim 5, the waveguide and cladding each defining a polymeric material formed from a common prepolymeric material.
- 30 8. A method as in claim 5, the altering step involving curing the waveguide and cladding, together, after formation.

9. A method comprising:
simultaneously deforming at least two guided, propagating electromagnetic waves.
- 5 10. A method comprising:
introducing electromagnetic radiation into a first waveguide, allowing the
electromagnetic radiation to couple from the first waveguide into a second waveguide, and
allowing the electromagnetic radiation to couple from the second waveguide into a third
waveguide.
- 10 11. A method comprising:
forming a waveguide array of at least two waveguides having a coupling characteristic
between them;
guiding electromagnetic radiation using the waveguide array by introducing the
15 electromagnetic radiation into the array and causing the radiation to be essentially totally
internally reflected within pathways of the array; and
altering the coupling characteristic of a section of the array including at least a portion of
each waveguide to alter the coupling characteristic of the waveguides relative to each other.